The Cleaveland/Price Approach

Cleaveland/Price has a very basic approach to design...keep it simple. It is an approach that is employed from material selection to mechanical design.

The Cleaveland/Price ILO-C hookstick operated in-line transmission switch parts are manufactured from high-strength, high-conductivity copper. All switches are of non-cast design for superior dependability of parts. Switch performance is not compromised by flaws that could occur in the casting process.
Engineered for Simplicity

The Cleaveland/Price ILO-C

The ILO-C hookstick operated disconnect switch is a field-proven product; a blend of high technology and simplicity of design. The live parts of the switch are made from hard-drawn, high-conductivity copper, a material selected for maximum strength and minimal switch weight. The switch contacts are high-pressure line type to establish effective current transfer while reducing operating force and extending contact life. Contact surfaces are silver-to-silver. Contact springs are stainless steel and positioned to increase spring force during short circuit. The switch is supplied with a polymer strain insulator having a chain-eye end fitting. The insulator has a high tensile strength rating to perform under ice and wind loads and to assure positive latching of the switch blade in both the open and closed positions. The switch is available with the Cleaveland/Price Superwhip™ to interrupt high levels of line charging current at 115 through 161 kV. The switch is not designed to break load current.

ILO-C Features

A High-conductivity copper live parts
B Silver-plated contacts
C Tin-plated terminal pads
D Stainless steel hookeyes
E Open position latch
F Closed position latch
G High-tensile strength insulator
H Stainless steel contact springs
I Latch-check and closing eyes
J Corona rings

Operation

The ILO-C should be operated from an insulated bucket truck with a hotstick. The switch is easy to operate as shown in the photographs to the right. Latching of the switch blade can be verified by using the latch-check eye.

Step 1
Engage switch hookeye

Step 2
Open the switch

Step 3
Latch in the open position
Applications
The Cleaveland/Price ILO-C is a single-phase, hookstick operated disconnect switch for transmission applications. It is a versatile switch that can serve many functions. The switch can be used to sectionalize long transmission lines, disconnect lines from substations, serve as a line tap switch, and serve as a temporary maintenance switch. The ILO-C design saves customers significant installation costs. The switch mounts in line with the transmission line conductor, eliminating the need for a group operated switch with associated mounting structure. The switch allows for easy, cost-efficient sectionalizing of transmission lines and isolation in high voltage substations.

Interrupting Line Charging Current
The ILO-C can be supplied with a Cleaveland/Price Superwhip™ up to 161 kV. The Superwhip™ is unsurpassed in its ability to interrupt line-charging current. At 115 kV, it is capable of dropping 45.9A (104 miles) of charging current.
Connection

The ILO-C can be installed in the transmission line with a compression connection or a bolted connection as shown in the adjacent photos.

<table>
<thead>
<tr>
<th>Max. kV</th>
<th>kV DL</th>
<th>Rated Circuit Breaker Class A</th>
<th>Amp.</th>
<th>Full/Partial Load</th>
<th>Monotonic kV</th>
<th>Peak kV</th>
<th>Short Time kA</th>
<th>Style Number</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>R</th>
<th>Wt. lbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>72.5</td>
<td>350</td>
<td>435</td>
<td>1200</td>
<td>61</td>
<td>99</td>
<td>38</td>
<td>C02A520G01</td>
<td>50.4</td>
<td>37.6</td>
<td>45.25</td>
<td>17</td>
<td>34.75</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>123</td>
<td>550</td>
<td>672</td>
<td>1200</td>
<td>61</td>
<td>99</td>
<td>38</td>
<td>C02A520G02</td>
<td>64.6</td>
<td>53</td>
<td>60.63</td>
<td>30.18</td>
<td>50.25</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>145</td>
<td>650</td>
<td>813</td>
<td>1200</td>
<td>61</td>
<td>99</td>
<td>38</td>
<td>C02A520G03</td>
<td>75.2</td>
<td>62.2</td>
<td>69.83</td>
<td>39.31</td>
<td>59.5</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>750</td>
<td>937</td>
<td>1200</td>
<td>61</td>
<td>99</td>
<td>38</td>
<td>C02A520G04</td>
<td>83.5</td>
<td>70.4</td>
<td>78</td>
<td>47.62</td>
<td>67.65</td>
<td>81</td>
<td></td>
</tr>
<tr>
<td>245</td>
<td>1050</td>
<td>1300</td>
<td>1200</td>
<td>61</td>
<td>99</td>
<td>38</td>
<td>C02A027G02</td>
<td>113.6</td>
<td>95.81</td>
<td>103.63</td>
<td>72</td>
<td>92.65</td>
<td>138</td>
<td></td>
</tr>
<tr>
<td>72.5</td>
<td>350</td>
<td>435</td>
<td>2000</td>
<td>100</td>
<td>164</td>
<td>63</td>
<td>C02B007G01</td>
<td>50.4</td>
<td>37.6</td>
<td>45.25</td>
<td>17</td>
<td>34.75</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>123</td>
<td>550</td>
<td>672</td>
<td>2000</td>
<td>100</td>
<td>164</td>
<td>63</td>
<td>C02B007G02</td>
<td>64.6</td>
<td>53</td>
<td>60.63</td>
<td>30.18</td>
<td>50.25</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>145</td>
<td>650</td>
<td>813</td>
<td>2000</td>
<td>100</td>
<td>164</td>
<td>63</td>
<td>C02B007G03</td>
<td>75.2</td>
<td>62.2</td>
<td>69.83</td>
<td>39.31</td>
<td>59.5</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>750</td>
<td>937</td>
<td>2000</td>
<td>100</td>
<td>164</td>
<td>63</td>
<td>C02B007G04</td>
<td>83.5</td>
<td>70.4</td>
<td>78</td>
<td>47.62</td>
<td>67.65</td>
<td>93</td>
<td></td>
</tr>
<tr>
<td>245</td>
<td>1050</td>
<td>1300</td>
<td>2000</td>
<td>100</td>
<td>164</td>
<td>63</td>
<td>C02B008G02</td>
<td>113.6</td>
<td>95.81</td>
<td>103.63</td>
<td>72</td>
<td>92.65</td>
<td>162</td>
<td></td>
</tr>
</tbody>
</table>

Insulator Maximum Working Load

- 72.5 kV - 170 kV: 25,000 lbs.
- 245 kV: 40,000 lbs.